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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,440	01/13/2004	Naoyuki Maeda	WEN-0029	1091

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EXAMINER

JOHNSON III, HENRY M

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/755,440

Applicant(s)

MAEDA ET AL.

Examiner

Henry M Johnson, III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 011304.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities: on page 9, line 18, the projecting lens does not project the aperture opening directly onto the eye, but projects the image onto mirror 225.

On page 14, line 26, the examiner suggests using " alternatively" in place of besides.

On page 25, line 14, the word "constitution" is makes the meaning unclear.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,099,522 to Knopp et al. Knopp et al. disclose an apparatus for ophthalmic surgery including a laser (Fig. 10, # 87) with optics (Fig. 1, # 17), a beam steering and aiming unit (Fig. 10, # 75), a three dimensional tracking system (Fig. 10, #'s 50, 51, 53 & 54) using imaging and image processing to track a the limbus of an eye, the tracking unit providing input for the steering and aiming of the laser (Col. 28, lines 45-67). The tracking subsystem of the invention serves two important purposes: it tracks and follows the movements of the patient's tissue--not only the voluntary movements which can be damped with specialized treatment, but also the involuntary movements which are more difficult to control on a living specimen--and

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continuously re-presents an image of the same section of tissue. Thus the surgeon/user is provided a continuous, substantially immobilized view of that tissue regardless of patient movements; and it further provides a fail-safe means for immediately stopping the action of the surgical laser beam in the event the tracking is lost (Col. 12, lines 5-16). The use of the limbus for tracking is disclosed using imaging techniques (Col. 20, lines 18-40). The continuous imaging implies a reference image to track motion. The three dimensional tracking is capable of detecting all eye movements. Knopp et al. teaches in the background that marks can be placed on the eye for tracking (Col. 7, line 15). The comparison of successive images is interpreted as an alignment detection unit. The computer, which directly controls laser firing automatically interrupts the firing sequence should any of the required operational specifications not be met.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,099,522 to Knopp et al. as applied to claims 1 and 8 above and further in view of U.S. Patent 5,865,832 to Knopp et al. Knopp et al. '522 is discussed above, but does not teach tracking using pupil position. Knopp et al. '832 teaches the pupil of the eye may also serve as a tracking mark. This despite the fact that the pupil may change its dimensions, since as long as the change is symmetrical and is not so fast as to exceed the response time of the sensors. While not as attractive as the limbus for tracking the cornea, using the pupil as a landmark is understood to fall within the domain of the present disclosure whenever pure contrast-based algorithms are utilized in the tracking (Col. 18, line 66 to Col. 19, line 10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pupil tracking as taught by Knopp et al. '832 in the apparatus of Knopp et al. '522 to track eye movement as both are well known in the art as tracking techniques.

### ***Conclusion***

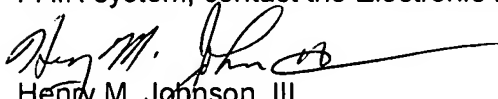
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,702,806 to Gray et al. teach using alignment marks on an eye and rotational movement of an eye when moving from a sitting to a prone position.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Henry M. Johnson, III  
Primary Examiner  
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